

REMARKS

Claims 2, 4-5, 7 and 14-19 are pending in this application. Claims 2, 4, 15 and 27 are independent.

Claims 2, 14-17 and 19 stand rejected under 35 USC §102(b) as anticipated by Nagai, et al. (U.S. Patent No. 5,817,194). Claims 4-5, 7 and 18 stand rejected under 35 USC §103(a) as obvious over Kenji, et al. (JP Pub. 11-021660), in view of Nagai. The rejections are respectfully traversed.

The Examiner cites Table 1, column 3 and column 6 of Nagai as disclosing the invention of independent claims 2, 15 and 17. More particularly, it is asserted that Nagai discloses an alloy composition which excludes bismuth and has 0.002-0.015% by mass of phosphorus, citing Table 1 after heating.

However, according to Table 1, after a reduction of 0.01wt.% by mass of phosphorus, the described alloy has 0.04wt.% by mass of phosphorus remaining within the alloy (i.e., 0.05% reduced by 0.01% = 0.04%). Hence, Nagai fails to teach an alloy having the required percentage by mass of phosphorus, as recited in independent claims 2, 15 and 17.

Accordingly, Nagai does not anticipate claims 2, 14-17 and 19. It is therefore respectfully requested that the rejection be reconsidered and withdrawn.

Independent claim 4 also requires that the plating contain 0.002 to 0.015% by mass of phosphorus. As noted in a previous response, the Examiner has acknowledged that Kenji lacks the required phosphorus of independent claim 4. As discussed above, Nagai also lacks the required mass of phosphorus.

Accordingly, claim 4 patentably distinguishes over the applied prior art combination. Therefore, it is respectfully requested that the rejection of claims 4-5, 7 and 18 also be reconsidered and withdrawn.

It is perhaps worthwhile noting that, as discussed on page 7, lines 7-16 of the present specification, when the phosphorus content exceeds 0.015% by mass, the

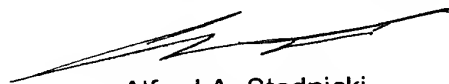
Docket No. 3008-28
File No. 521.41457X00
Client Ref. PHCF-01094

concentration of phosphorus becomes uneven in the production of the solder. This makes it virtually impossible to produce a lead free solder having homogenous properties. Furthermore, in column 3, line 59, through column 4, line 3, Nagai discloses that the wettability to copper wire is not obtainable with a phosphorus range of less than 0.05 wt%. Thus, Nagai explicitly excludes the range of phosphorus required by the subject claims.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed local telephone number, in order to expedite resolution of any remaining issues and further to expedite passage of the application to issue, if any further comments, questions or suggestions arise in connection with the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 01-2135 and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP



Alfred A. Stadnicki
Registration No. 30,226

1300 North Seventeenth Street
Suite 1800
Arlington, VA 22209
Tel.: 703-312-6600
Fax.: 703-312-6666

AAS/slk